

The invention claimed is:

1. An automotive vehicle comprising:

a first passenger seating area;

a front door located laterally adjacent the first seating area;

a second passenger seating area located rearwardly of the first seating area;

a second door located laterally adjacent the second seating area, the second door being located on the same side as and rearwardly of the first door; and

a structural reinforcement located between the first and second seating areas, the reinforcement being laterally elongated and having a lower structural beam and an upper structural beam;

a majority of the lower beam being located substantially adjacent a vehicle floor area; and

the upper structural beam being located substantially adjacent a vehicular belt-line area.

2. The automotive vehicle of Claim 1 wherein the structural reinforcement further comprises a first diagonal beam extending between the upper and lower beams.

3. The automotive vehicle of Claim 2 wherein the structural reinforcement further comprises a second diagonal beam crossing the first diagonal beam and extending between the upper and lower beams.

4. The automotive vehicle of Claim 1 wherein the upper beam of the structural reinforcement is lower in height adjacent a fore-and-aft extending centerline of the vehicle.

5. The automotive vehicle of Claim 4 wherein the lower beam of the structural reinforcement is raised adjacent the fore-and-aft extending centerline of the vehicle, and the vehicle is of a unibody construction.

6. The automotive vehicle of Claim 1 further comprising an entertainment system attached to the structural reinforcement.

7. The automotive vehicle of Claim 6 wherein the entertainment system includes a rear passenger audio transmitting device.

8. The automotive vehicle of Claim 1 further comprising a rear passenger safety restraint is attached to the structural reinforcement.

9. The automotive vehicle of Claim 8 wherein the rear passenger safety restraint is an inflatable airbag.

10. The automotive vehicle of Claim 1 further comprising at least one roll bar attached to the structural reinforcement.

11. The automotive vehicle of Claim 1 further comprising an electronic device attached to the structural reinforcement.

12. The automotive vehicle of Claim 1 further comprising armor attached to the structural reinforcement.

13. The automotive vehicle of Claim 1 wherein the structural reinforcement assists the vehicle in satisfactorily passing Federal Motor Vehicle Safety Standard side impact test 214.

14. The automotive vehicle of Claim 1 further comprising at least two front seats located in the front seating area, the front seats being independently movable and not restrained by the structural reinforcement.

15. The automotive vehicle of Claim 1 further comprising a convertible roof movable to a raised position, covering the front and rear seating areas, to a retracted position.

16. The automotive vehicle of Claim 1 wherein the structural reinforcement is hydroformed metal.

17. An automotive vehicle comprising:
a front passenger seat;
a rear passenger seat located substantially behind the front seat;
a left structural rocker panel;
a right structural rocker panel; and
a structure extending in a substantially cross-vehicle direction between the front and rear seats, a first portion of the structure being adjacent at least a vehicular beltline, a second portion of the structure being directly attached to the rocker panels;
the front seat being movable in a fore-and-aft direction independent of the structure.

18. The automotive vehicle of Claim 17 wherein the first portion of the structure comprises an upper structural beam and the second portion of the structure comprises a lower structural beam.

19. The automotive vehicle of Claim 18 wherein the structure further comprises a first diagonal beam extending between the upper and lower beams.

20. The automotive vehicle of Claim 19 wherein the structure further comprises a second diagonal beam crossing the first diagonal beam and extending between the upper and lower beams.

21. The automotive vehicle of Claim 17 further comprising at least four passenger doors, at least two in front of the structural device and at least two behind the structure.

22. The automotive vehicle of Claim 21 further comprising left and right B-pillars extending substantially vertically above the rocker panels, the structure being directly attached to the B-pillars, the rocker panels and B-pillars being of unibody construction.

23. The automotive vehicle of Claim 22 further comprising door hardware mounted to the structure.

24. The automotive vehicle of Claim 17 further comprising an entertainment system attached to the structure.

25. The automotive vehicle of Claim 24 wherein the entertainment system includes a rear passenger audio transmitting device.

26. The automotive vehicle of Claim 17 further comprising a rear passenger safety restraint attached to the structure.

27. The automotive vehicle of Claim 26 wherein the rear passenger safety restraint is an inflatable airbag.

28. The automotive vehicle of Claim 17 wherein the first portion of the structure device is an upper structural beam which is lower in height adjacent a fore-and-aft extending centerline of the vehicle.

29. The automotive vehicle of Claim 24 further comprising at least one roll bar attached to the structure.

30. The automotive vehicle of Claim 17 further comprising an electronic device attached to the structure.

31. The automotive vehicle of Claim 17 wherein the structure is hydroformed metal.

32. The automotive vehicle of Claim 17 further comprising armor attached to the structure.

33. The automotive vehicle of Claim 17 further comprising a convertible roof automatically movable to a raised position, covering the front and rear seats, to a retracted position.

34. An automotive vehicle comprising:

- a body having a front seating area and a rear seating area;
- at least one front passenger door opening positioned to allow access to the front seating area;
- at least one rear passenger door opening positioned to allow access to the rear seating area;
- a convertible roof movable from a raised position, covering at least one of the seating areas, to a retracted position; and
- a structural reinforcement extending in a substantially cross-vehicle direction between the seating areas, the structural reinforcement including a substantially hollow upper beam extending in a cross-vehicle direction substantially adjacent a beltline of the body.

35. The automotive vehicle of Claim 34 further comprising an entertainment system attached to the structural reinforcement.

36. The automotive vehicle of Claim 35 wherein the entertainment system includes a rear passenger audio transmitting device.

37. The automotive vehicle of Claim 34 further comprising a rear passenger safety restraint attached to the structural reinforcement.

38. The automotive vehicle of Claim 37 wherein the rear passenger safety restraint is an inflatable airbag.

39. The automotive vehicle of Claim 34 wherein the structural reinforcement further comprises:

a lower structure beam; and

at least two crossing and diagonal, structural beams;

wherein the lower and diagonal beams are all substantially hollow.

40. The automotive vehicle of Claim 34 wherein the upper beam of the structural reinforcement is lower in height adjacent a fore-and-aft extending centerline of the vehicle.

41. The automotive vehicle of Claim 34 further comprising at least one roll bar attached to the structural reinforcement.

42. The automotive vehicle of Claim 34 further comprising at least two front seats located in the front seating area, the front seats being independently movable and not attached to the structural reinforcement.

43. The automotive vehicle of Claim 34 wherein the convertible roof further comprises:

an automatic actuator;

roof rails and roof bows operably movable by the actuator; and

a pliable roof cover attached to the roof bows.

44. The automotive vehicle of Claim 34 wherein the convertible roof further comprises:

an automatic actuator; and

at least one hard-top roof panel operably movable by the actuator.

45. The automotive vehicle of Claim 34 further comprising a structural rocker panel attached to the structural reinforcement.

46. The automotive vehicle of Claim 34 further comprising a central floor tunnel attached to the structural reinforcement.

47. A structural reinforcement system for an automotive vehicle, the system comprising:

an upper structural beam having at least three offset wall segments;

a lower structural beam having at least three offset wall segments, majorities of the upper and lower beams being substantially parallel and spaced from each other; and

at least two diagonal structural beams spanning between the upper and lower beams;

a central portion of the upper beam being recessed below a majority height which is outboard on both sides of the central portion.

48. The system of Claim 47 wherein the diagonal beams cross each other.

49. The system of Claim 47 further comprising a floor tunnel attachment section extending from the lower beam.

50. The system of Claim 47 further comprising rocker panel attachment sections.

51. The system of Claim 47 further comprising an entertainment system attached to at least one of the beams.

52. The system of Claim 47 further comprising B-pillar attachment sections.

53. The system of Claim 47 further comprising at least one structural, substantially vertical beam extending between the upper and lower beams.

54. The system of Claim 47 further comprising a rear passenger safety restraint is attached to at least one of the beams.

55. The system of Claim 47 further comprising at least one roll bar attached to at least one of the beams.

56. The system of Claim 47 further comprising an electronic device attached to at least one of the beams.

57. The system of Claim 47 wherein the beams are hydroformed metal.

58. The system of Claim 47 wherein there are at least four offset walls for each of the upper and lower beams defining hollow box-sections.

59. An automotive vehicle apparatus comprising a structural reinforcement having a top view shape including a first arcuately curved segment and a second arcuately curved segment, the arcuately curved segments being joined at a central segment, outboard ends of the curved segments and the central segment all projecting in substantially the same direction relative to the curved segments.

60. The apparatus of claim 59 further comprising substantially vertically extending, vehicle body pillars attached to the ends of the reinforcement.

61. The apparatus of claim 60 wherein the pillars are B-pillars.

62. The apparatus of claim 59 wherein the reinforcement is elongated in a cross-vehicle direction with the ends being located adjacent outboard edges of the vehicle body.

63. The apparatus of claim 59 wherein the ends and central segment of the reinforcement all extend in a forward direction relative to the vehicle.

64. The apparatus of claim 59 further comprising a passenger seat located adjacent to each curved segment.

65. An automotive vehicle apparatus comprising:
a reinforcement extending in a cross-vehicle direction substantially from one outboard side of the vehicle to the other; and
a passenger seat-retaining member attached to the reinforcement.

66. The apparatus of claim 65 further comprising a vehicle floor, wherein at least a majority of the reinforcement is spaced above the floor.

67. The apparatus of claim 65 further comprising a second passenger seat-retaining member attached to the reinforcement.

68. The apparatus of claim 65 further comprising a front passenger seat attached to the member and the member defines a hollow box section.

69. The apparatus of claim 65 further comprising substantially vertically extending, vehicle body pillars, wherein outboard ends of the reinforcement are secured to the pillars.